

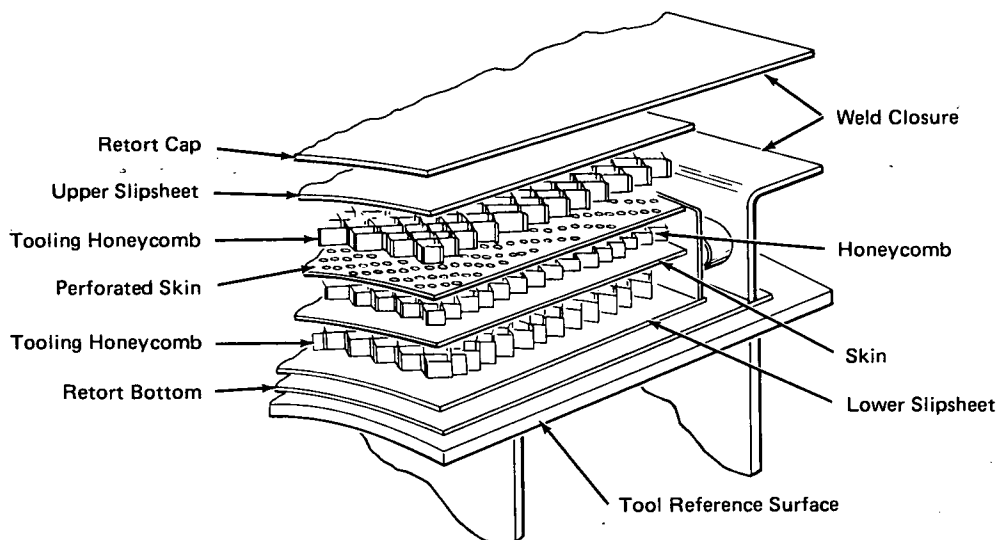
NASA TECH BRIEF

Langley Research Center



NASA Tech Briefs announce new technology derived from the U.S. space program. They are issued to encourage commercial application. Tech Briefs are available on a subscription basis from the National Technical Information Service, Springfield, Virginia 22151. Requests for individual copies or questions relating to the Tech Brief program may be directed to the Technology Utilization Office, NASA, Code KT, Washington, D.C. 20546.

New Concept in Brazing Metallic Honeycomb Panels



A new concept has been devised for the brazing of acoustically-treated, metallic honeycomb-panel assemblies. It consists of the application of an aluminum oxide coating sprayed on tooling materials. This coating provides a surface which will not be wetted by the brazing alloy and which stops metallic diffusion welding of tooling materials to the part being produced.

The illustration shows how the reusable tooling honeycomb and aluminum oxide-coated slipsheets are used on both sides of the part assembly to wick the brazing alloy out of any perforations.

Braze alloy is applied to the part pieces which are then installed in the retort. The retort is sealed to effect control of the atmosphere surrounding the braze product. Pressure is applied to the exterior of the retort to maintain preload intimacy of the part pieces. The retort assembly is heated sufficiently to braze the part and then is cooled. The retort seal is broken, and the part is removed.

This method eliminates the loss of tooling materials

and parts from braze wetting and allows fall-apart disassembly of the tooling after brazing.

Note:

No further documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Langley Research Center
Mail Stop 139-A
Hampton, Virginia 23665
Reference: B73-10358

Patent status:

NASA has decided not to apply for a patent.

Source: Paul D. Carter, Robert E. Layton,
and Francis W. Stratton of
The Boeing Company
under contract to
Langley Research Center
(LAR-10957)

Category 08

NW31-S
RM. 1313
KSC HQ3.
-1-